WageIndicator Living Wages
Methodological Note

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About the WageIndicator Foundation

WageIndicator Foundation (Stichting Loonwijzer) - www.wageindicator.org

The WageIndicator Foundation was founded in 2001 to contribute to a more transparent labour market for workers and employers. It collects, compares and shares labour market information through (online & face-face) surveys and desk research. It serves as an online library for wage information, labour law and career advice.
The WageIndicator Foundation is assisted by world-renowned universities, trade unions and employers' organisations and currently operates in 80 countries. In more than 25 countries - mainly in Africa, Asia, and Central America - the national WageIndicator websites are supported with offline actions like face-to-face surveys, fact finding debates and media campaigns.

The foundation's international staff consists of some 100 specialists spread over the whole world. Foundation is a global organisation reaching millions on a monthly basis. For more information please visit: WageIndicator.org. The WageIndicator Foundation has offices in Amsterdam (HQ), Ahmedabad, Bratislava, Buenos Aires, Cape Town, Dar es Salaam, Maputo and Minsk.

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About CELSI

Central European Labour Studies Institute (CELSI) - www.celsi.sk

CELSI is an independent non-profit research institute based in Bratislava, Slovakia. It fosters multidisciplinary research about the functioning of labour markets and institutions, work and organisations, business and society, and ethnicity and migration in the economic, social, and political life of modern societies. Supported by its network of Research Fellows and Affiliates and a new Discussion Paper series, CELSI aims to make a contribution to cutting-edge international scientific discourse. Hosting the Bratislava WageIndicator Office, CELSI has developed expertise in data management and services.

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1 Methodological Note

- **WageIndicator Mission: Greater labour market transparency for the benefit of all employers, employees and workers worldwide by sharing and comparing information on wages, labour law and careers.**
- **WageIndicator Vision: Understanding the labour market enables people to make informed decisions for a happier working life.**

WageIndicator's mission is to increase transparency about wages and make information about labour markets publically available. WageIndicator operates websites in different parts of the world to publish complex information on wages, including living wages, statutory minimum wages, real wages and collective agreements.

The credibility of the information published is assessed by local partners. In each country WageIndicator communicates with national partners, such as academics from national universities, contract partners like national trade union centres and employers organisations, media houses, gender-related NGOs and local labour market experts. These partnerships are useful in order to obtain and share information on prices and other wage and salary issues, including full text collective agreements.

Since 2001 WageIndicator has experience in combined online/offline data collection in the field of wages and income. The data collection technique uses online, tablet and paper survey tools to collect information on wages and prices for a large set of countries (80). Campaigns in the media are traditionally used to increase the number of responses and therefore the reliability of the reported information. Data collection through one central (data base) system is cost-efficient and quick when the current global overview is needed.

WageIndicator's operations are funded from commercial, government and private sources. Presenting living wages is part of WageIndicator's ambition and concept. Figures are always presented in context, i.e. together with the statutory minimum wages and real wages in the relevant country/sector.

2 The concept of living wage

Since 1919 living wage is recognized by the International Labor Organization (ILO) as a basic human right (ILO, 2008). ILO endorses *minimum living wage* within a wider concept of *Decent work* that aims for work in conditions of freedom, equity, security and human dignity. In 1948 the United Nations Universal Declaration of Human Rights officially recognized the need for workers to receive a living wage.[1] The exact definition of living wage however has never been established and each campaign defines living wage differently (see Anker, 2011). Fairtrade International together with other certification companies understands a living wage as the "*remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs, including provision for unexpected events*" (Anker and Anker, 2013). The Asia Floor Wage campaign launched in 2009 "*proposes a wage for garment workers across Asia that would be enough for workers to live on. It accounts for the cost of a fair amount of food per day, plus other essential living costs such as healthcare, housing, clothing, childcare, transportation, fuel, education, etc*". (Merk, 2009). The living wage campaign in New Zealand launched in 2012 defines a living wage "*as the income necessary to provide workers and their families with the basic necessities of life*" (King and Waldegrave, 2012). In the US the living wage is calculated by Amy K. Glasmeier from MIT and distinguished by family size, composition and location.[2] Glasmeier defines living wage as "*an approximate income needed to meet a family's basic needs [that] would enable the working poor to achieve financial independence while maintaining housing and food security*". The campaign organised locally since 2008 in Vancouver in Canada defines living wage "*on the principle that full-time work should provide families with a basic level of economic security, not keep them in poverty*" (Richards et al., 2008). In this campaign the living wage is then calculated as "*the amount needed for a family of four with two parents working full-time to pay for necessities, support the healthy development of their children, escape financial stress and participate in their communities*".

The very comprehensive calculation is developed in Ireland and the UK which define a Minimum Income Standard (MIS) based on public views about a minimum standard for different family types (Hirsch, 2013; Collins et al., 2012). Typically the group of respondents from a mixture of social and economic backgrounds arrives at a negotiated consensus about the cost of goods and services to enable a minimum essential standard of living. The MIS is then calculated as the gross income necessary to afford these expenditures, taking account of the tax liabilities and social welfare entitlements of each household type. The Living Wage Foundation in the UK uses MIS in the London Living Wage campaign. The advantage of MIS is that it reflects the real household needs in a very comprehensive way and figures are typically provided for a broad range of household types. An extension of the work on MIS calculates the cost of a minimum acceptable standard for rural

[1] Declaration of Human Rights, in Article 23(3) states: "Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection."

[2] The living wage calculator is available at http://livingwage.mit.edu/.

households (see MIS for Remote Rural Scotlandin Hirsch et al. (2013)). The downside of MIS is the difficulty to understand what it represents and whether a negotiated consensus is understood as a mean, mode or median estimate of basic needs of workers. The other downside of MIS is the high initial cost of development and the monitoring of living standards in the society necessary for regular updating. Therefore the universal applicability of MIS method remains limited.

The methodology to calculate living wages adopted by WageIndicator is broadly consistent with the previous living wage campaigns reviewed in Anker (2011). The calculation is country and region (within countries and between countries) specific and assumes national food consumption patterns, variation in prices, characteristics of a typical family and labour market conditions. WageIndicator publishes all information about living wages on its websites, and invites stakeholders to comment through its interactive web platform as well as by means of workshops in covered countries. The concept of the living wage is dynamically evolving and there are several approaches present in the public discourse. WageIndicator living wage introduces a concept that allows users and stakeholders through web interface to share and compare living wages across countries and regions (within countries) using a methodology that accounts for local conditions but also is harmonized to provide for international comparison. The methodology also provides for cost-efficient application in countries across the globe as well as regular updating (e.g. quarterly). Under the approach of wages in context, living wages are reported together with minimum wages and actual wages, as well as national poverty lines.

3 The calculation of living wage

While the definition of living standards can vary between countries, all living wage campaigns aim to ensure that wages are sufficient to meet the basic needs of workers and their families. WageIndicator defines the living wage as the amount of money sufficient to cover food expenses, accommodation costs, transportation expenses and other expenses together with a provision for unexpected events.

WageIndicator living wage

Three different approaches are applied to calculate the living wage for different household types and to respond to different demands for living wage information.

1) *WageIndicator one-person household* living wage estimates the amount of money for a single adult individual without children. This approach provides a baseline estimate and permits a direct comparison with minimum wages and real wages, which are defined at the individual level, too.
2) *WageIndicator representative household living wage* estimates the amount of money to support a *typical* family with children in a given country. The number of children is approximated from the national fertility rate (see Table A1 in the Appendix).[3] This approach accounts for variation in household structure across the globe. The living wage is estimated for an equivalent of a full-time worker. The calculation adjusts for the gender differences in the employment rates, so that the total household income earned by two parents receiving living wage should always be sufficient to cover the family expenses.
3) *WageIndicator 2-adults 2-children household living wage* estimates the amount of money to support a family of two adults and two children. This approach has several advantages. First it provides a global comparison of living wages, focusing on price variation and keeping the family composition constant. Second the approach is adopted by several living wage campaigns (e.g. Asia Floor Wage, New Zealand, Vancouver) to which it is directly comparable. Third, the family with two children is the minimum average sized family required to ensure population replacement.[4] Living wage should at least be sufficient to support such household. The living wage is estimated for an equivalent of a full-time worker. The calculation adjusts for the gender differences in the employment rates, so that the total household income earned by two parents receiving living wage should always be sufficient to cover the family expenses.

[3] The definition of a typical family is consistent with Anker and Anker (2013). The fertility rates are scarcely available at regional levels.

[4] The actual replacement fertility rate is slightly greater than 2 and varies across countries. We take 2 as a reasonable approximation.

Data collection of prices

The calculation of living wages internationally requires considerable information from various national data sources or international databases. Furthermore it is necessary that obtained information is updated to guarantee the validity of estimates. The estimation of living wage for the large number of countries is therefore at least challenging.[5] The first attempt to provide globally comparable estimates of living wage for 100 countries is presented in Guzi (2014). This approach illustrates the possibility of using prices collected through web-surveys in the living wage calculation.

WageIndicator has developed expertise in data collection through means of online web surveys. The WageIndicator Cost of Living Survey (COL) is a web survey was specifically designed to collect the actual prices of items necessary to calculate the cost of living. Since January 2014, the Cost of Living Survey is posted on the national WageIndicator websites in 80 countries, which together received 23 million web visitors in 2013. The survey asks web visitors to indicate consumer prices for about 100 goods and services. Each day the national websites post a teaser asking web visitors to indicate the price for one item and the cycle of questions repeats. Similar items are put into groups (e.g. prices of vegetables) and visitors are asked to fill prices on all items in the group. In this way WageIndicator Cost of Living Survey is not a standard survey that does not require a respondent to complete prices for all the items (although this option is available to respondents). The collection of prices has been very successful and between January and October 2014, respondents provided more than 250,000 prices combined on all items in all countries.

The calculation of food costs

The food costs are calculated using the specified amounts of the food categories needed for one month. The information comes on two data sources. The first is the WageIndicator Cost of Living Survey which collects the actual prices of all items necessary to calculate the living wage. The second is the FAO database[6], which includes the national food consumption patterns in per capita units, distinguished for about 50 food groups.

The food expenditure is the main component of living wage and it is determined by the price of food basket. The composition of food basket for each country is taken from the national food balance sheet published by FAO. The sheet includes the supply of commodities available in the country, and hence reflects the potential food consumption basket of an average individual. To avoid the negative bias in the quality of the consumption basket in the low income countries, the food basket is checked whether the percentage of calorie from proteins is consistent with WHO balance diet.[7] The baskets which do not pass this test are replaced in calculations by the average of

[5] Anker (2005) estimates living wage for 12 countries at different level of development.

[6] The Food and Agriculture Organization (FAO) of the United Nations publishes data online at http://faostat3.fao.org/faostat-gateway/go/to/download/FB/*/E

[7] FAO food balance sheet includes information on proteins in each food category. World Health Organization (WHO/FAO, 2003) defines a balanced diet to comprise minimum 10-15 percent of

appropriate food baskets of neighboring countries. FAO (2013) informs that in the world as a whole per capita food supply rose from about 2,200 kcal/day in the early 1960s to more than 2,800 kcal/day by 2009. Food supply show a considerable variability across regions (within countries), Europe has the greatest average supply at 3,370 kcal/day, closely followed by Americas, and average supply in Africa is the lowest below 2,600 kcal/day. FAO explains that these figures represent the average supply available for the population as a whole but it is important to note that the amount of food actually consumed may be lower. This is due to losses of edible food and nutrients in the household, e.g. during storage, in preparation or cooking. A nutritional requirement for good health proposed by World Bank equals to 2,100 calories per person per day (Haughton and Khandker, 2009). The amount of calories per person assumed in the calculation of living wage is similar in the literature.[8]

The food costs calculation assumes that all foods will be prepared at home and purchased at the lower prices from supermarkets. The prices from the WageIndicator Cost of Living Survey are used to calculate the cost of the food basket following the current food supply in a country, scaled to 2,100 calories (the Cost of Living Survey questionnaire was deliberately designed to include all food items from the FAO database). Food costs may differ between regions (within countries) within a given country and this variation is captured in the WageIndicator Cost of Living Survey.

The calculation of housing costs

The cost of housing for a one-member household is approximated by the monthly rental rate for a 1-bedroom apartment outside urban centres. The housing cost for a family with children is derived from the rental rate for a 3-bedroom apartment outside urban centres. Prices are collected in the Cost of Living Survey. The housing cost includes utility and other housing costs (e.g. cost of electricity, water, garbage collection, etc.).

The calculation of transport costs

Transportation is an important cost for households because most people commute for work or travel for their daily activities (e.g. shopping). It is assumed that families cannot afford to own a motorbike or car on the living wage and they rely on other means of transportation. Public transport service is commonly available in most urban places, so the price of a regular monthly pass is taken as the transport cost for an adult. It is assumed that children may travel for free with their parents. In rural places where no public transportation is available the expenses are determined by the cost of transportation (return ticket) to the nearest town once a week for adult

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calories from proteins; 15-30 percent of calories from fats; 50-70 percent of calories from carbohydrates and at least 400 grams of vegetables and fruits per day.

[8] Asia Floor Wage campaign assumes 9,000 calories/day for a family of two adults and two children that is equal to 2250 calories/person/day. Anker and Anker (2013, 2014) assume 2261 calories/person/day in the rural South Africa and 2364 calories/person/day in Southern Malawi.

household members. This assumption about rural transport is consistent with Anker and Anker (2013) and shall be implemented in the calculations of WageIndicator living wages in the medium term.

Other expenses and provision for unexpected expenditures

The calculation of living wage cannot rely solely on food prices, as it would not sufficiently capture the price development of other important items such as housing. It is therefore desirable to include the most relevant expenditure directly in the calculation of living wage. WageIndicator follows this approach and includes household expenses on accommodation as well as personal transport in the calculation of living wages.

National living wage campaigns sometimes rely on data from national household income and expenditure surveys to estimate the amount of expenditures beyond the three basic categories: food, accommodation and transport. These surveys are however not readily available for a large set of countries. Because the bundle of non-food commodities varies between countries according to the habits and culture but also over time, it is difficult to come up with a universal basket of non-food goods and services to cover the needs in all countries.

One approach is to approximate the other costs from food costs by a multiplier according to the Engel Law.[9] For instance Asia Floor Wage campaign assumes that garment workers in South Asia spend around half of their income just on food items. The amount of non-food costs is then approximated with the food costs without the need for price surveys.

As concerns health expenditures, most countries provide at least basic public health care services. Yet additional expenses on medication not available from public facilities or on the cost of private health care in emergency situations are often required. In addition, households need to be able to cover their basic living expenses even if they temporarily lose income due to health related temporary absence from work.

Education at public schools is provided at relatively low cost comprising school fees and supplementary materials. Anker and Anker (2013) estimate the cost of children's education in the rural South Africa at 1 percent of household expenditure. The living wage campaign in Vancouver adds the cost of child care (the cost of full-time child care for the first child and the cost of before and after school care and summer care for the second child) and in addition accounts for a cost of adult education. While the cost of parent's education in Vancouver comprises only 1.5 percent of total household expenses, the cost of child care is substantial and amounts to 22 percent of total expenses.It is important to note that the concept of living wage is based on basic needs and does

[9] The German statistician Ernst Engel was the first to investigate the relationship between goods expenditure and income systematically in 1857. Based on the empirical evidence the assumption is made that the percentage of total expenditures devoted to non-food expenses differs from 30 per cent for low-income countries, to 40 per cent for lower middle-income countries, 50 per cent for upper middle-income countries, and 75 per cent for high-income countries (Anker, 2005).

not provide for family members to participate in advanced education or for entertainment or recreational activities.

On the other hand, the concept of living wage does provide for spending on non-specified discretionary purchases. In particular, it needs to be ensured that the living wage is sustainable in that it allows for unforeseen events such as illness, accidents or unemployment. Provision for unexpected events is also common in the living wage calculation in the literature. Anker and Anker (2013) include 10 percent margin and the living wage proposed in the Vancouver initiative assumes the two weeks income from labour as the provision for unexpected events on a yearly basis (i.e. approximately 4% of monthly household expenditure). We follow the literature and we add a margin of 10 percent to the final estimate of the living wage on top of the food, housing, and transportation expenditures to account for household expenditures on such unexpected expenditures, as well as the expenditure categories listed above.

WageIndicator Cost of Living Survey inquires about the expenditures on health and education, and shortly will cover specific expenditures on clothing as well. In the medium-term the provision for such expenditures will be detailed-out in the living wage calculations to more precisely estimate household expenditures on basic clothing, education and health items.

The living wage as a full-time worker equivalent

The living wage is always estimated for an equivalent of a full-time worker which makes it comparable to a legal minimum wage or real wages. The family income is supported by two adults and the calculation adjusts for the gender differences in the employment rates. Total supply of labour within a family is equal to the sum of participation rates of both genders adjusted for unemployment rate in the given country (see Table A1 in the Appendix).[10] In this way the total household income earned by two parents receiving living wage should always be sufficient to cover the family expenses. In other words, in a country with high unemployment jobs are more difficult to find and hence living wage needs to be higher to compensate for the risk of unemployment. We adopt the principle that the living wage should be earned within a standard working hours and therefore calculations of household labour supply do not account for overtime work.

It is also possible that households generate in-kind income. We interpret living wage as the earnings (in monetary equivalent) from employment needed to provide for basic needs. As long as people who work and obtain in-kind benefits participate and are employed according to our statistics (which is typically the case in survey-based statistics), our measures are correctly reported, i.e. unaffected by the possibility that some wages may be (partly) paid in kind. The same

[10] Estimates on the economically active population are publicly available in the ILO EAPEP database which includes the participation and unemployment rate of the working age population by gender in 190 countries as of 2010.

holds for self-employed, as long as they report to be in employment (participating in the labour market and not unemployed) in our statistics.

Table 1 concisely summarizes the assumptions involved in the living wage calculations for three different types of household. In the Appendix the parameter of three living wage campaigns are provided for a comparison in Tables A2-A4.

Table 1:

a.	**WageIndicator one-person household**
Household composition	*One adult*
Interpretation of living wage	Living wage defines a net income of full-time worker that is sufficient to cover food, accommodation and transportation on a monthly basis.
Employment status	Full-time worker
Food expenses	The composition of food basket with 50 food items reflects the actual food consumption in the country. A nutritional requirement is set at 2,100 calories per person per day.
Accommodation	The monthly rental rate of apartment (1 bedroom) outside of city centre.
Transportation	The price of a regular monthly public transportation pass.
Provision for unexpected events	10% of living wage

b.	**WageIndicator representative family**
Household composition	*Two adults with children; the number of children is determined by the current fertility rate in the country.*
Interpretation of living wage	Living wage defines a net income of full-time worker that is sufficient to cover food, accommodation and transportation on a monthly basis for a typical family adjusting for two-parent employment rate.
Employment status	The equivalent of full-time workers in the family is obtained as the sum of participation rates of both genders adjusted for unemployment rate in the country.
Food expenses	The composition of food basket with 50 food items reflects the actual food consumption in the country. A nutritional requirement is set at 2,100 calories per person per day.
Accommodation	The monthly rental rate of apartment (3 bedroom) outside of centre.
Transportation	The price of two regular monthly public transportation passes. Children are assumed to travel for free with their parents.
Provision for unexpected events	10% of living wage

c.	**WageIndicator standardized household**
Household composition	*Two adults with two children.*
Interpretation of living wage	Living wage defines a net income of full-time worker that is sufficient to cover food, accommodation and transportation on a monthly basis for a family with two adults and two children adjusting for two-parent employment rate.
Employment status	The equivalent of full-time workers in the family is obtained as the sum of participation rates of both genders adjusted for unemployment rate in the country.
Food expenses	The composition of food basket with 50 food items reflects the actual food consumption in the country. A nutritional requirement is set at 2,100 calories per person per day (applies to children as well).
Accommodation	The monthly rental rate of apartment (3 bedroom) outside of centre.
Transportation	The price of two regular monthly public transportation passes. Children are assumed to travel for free with their parents.
Provision for unexpected events	10% of living wage

4 The publication of living wage estimates and stakeholder involvement

WageIndicator presents estimates of living wages in an online application that is visually attractive to users (see www.livingwageindicator.org). The policy of full transparency with respect to calculations and methodology is adopted with the objective of providing for accountability and stakeholder involvement.

WageIndicator publishes living wages as a range with the lower bound of 25th percentile and upper bound of the 50th percentile of calculated living wages based on the data from the WageIndicator Cost of Living survey, to reflect the variation of prices within a country. 50th percentile (median) is the value for which half of the respondents report higher and the other half lower values of costs of living. 25th percentile is the value for which 75% of respondents report higher costs of living, implying a cost-optimizing household seeking cheaper-than-average housing and food compared to the national average (median).

The living wage is calculated for different household types as described above. All figures are always presented in the national currency and are also expressed in EURO to enable a global overview. The components of the living wage, such as food and housing expenses are shown separately. Living wage estimates are quarterly updated to keep up with changing price levels. WageIndicator publishes living wage for smaller geographical units such as individual cities or regions within a country when information on prices is sufficient. Living wages figures are published in context together with minimum wages, actual wages, and national poverty thresholds.

Transparent, timely, and broad publication of living wages and the underlying methodological notes on interactive WageIndicator national websites serve as a powerful feedback channel involving stakeholders around the globe: including employee and employer representatives, civil society organisations, academics, policy makers, and our internet visitors. Stakeholder workshops in covered countries and national WageIndicator teams provide another check on the methods and results about living wages. Finally, respondents in the WageIndicator Cost of Living Survey report a measure of what they consider to be an adequate living wage in their country. Feedback on methodological questions as well as results is also obtained through factual discussions involving social partners in the relevant country. As another consistency check the subjective living wages are compared to those obtained from the cost of living survey. In case of discrepancies we consult national experts to identify and correct any possible sources of bias.

5 Current strongholds and long-term research agenda for the methodology

The strongholds of the proposed living wage methodology include:

- It is rooted in state-of-the art approaches and concepts outlined in the literature
- The richness of the data and the set of covered living expenses provides for regionally differentiated living wages within countries
- It is harmonized across countries and hence provides for reliable international comparison
- The calculation for three types of households accounts for the diversity of households within and across countries, providing for reliable and highly informative comparison within and across countries
- Data collection techniques provide for regular and frequent updating across all countries
- Reporting of the median as well as 25th percentile of living wage calculations provides for explicit comparison of well-defined concepts within and across countries, and over time. It also provides for a more transparent measure of living wage, reflecting the variation of prices and consumer preferences. A single figure, in contrast, could lead to a misperception of invariant prices and consumer choices, and singular number may not reflect all consumption and expenditure patterns.
- Effective inclusion of stakeholders (by means of workshops and direct discussions in covered countries as well as involvement of our survey respondents) in all stages of production and dissemination ensures reliability and consistency of the methodology and the results.

The living wage, as outlined in this report, is based on a set of assumptions. The long-run research objective is to provide for an ever more accurate calculation of living wages across regions, countries and over time:

- The living wage is not corrected for income tax, since low incomes are usually not subject to income tax at all (e.g. in South Africa in 2013, monthly income below R5296 is not subject to income tax, and the living wage for a typical family is estimated at R5590) or is subject to tax at a low rate. The living wage is not corrected for social contributions because these are very low in developing countries (e.g. mandatory social contributions in South Africa only include Unemployment Insurance Fund at 1% of gross pay). Our long-run research agenda include additional investigation of possibilities of accounting for taxes and social security contributions.
- A general long-term objective is to improve our web-based data collection, account for the variation of prices and consumption patterns, and ensure that we correct for any data issues that could potentially bias our results. Such biases are further limited by the fact that we collect data about prices and not individual characteristics and our price level calculations are represented as a range, with the median as the upper bound and 25th percentile as the lower bound.

- Respondents in the WageIndicator Cost of Living Survey additionally report a total monthly expenditure necessary for living in their country. This information can be considered as subjective living wage. As a consistency check the subjective living wage is compared to the calculated living wage. In case of discrepancies national experts are asked to identify and correct any possible sources of bias.
- When workers receive in-kind bonuses such as food, housing or travel allowances, these could be deducted from the living wage; we however take the living wage as the monetary equivalent of all income, including any in-kind provisions. We aim to obtain more precise information about the family composition and household production. This allows us to improve the living wage calculation in the countries with high share of informal employment. Inasmuch as living wages are determined by expenditures on a basket of basic needs and people report employment status even if it is informal, our calculations are not directly affected by in-kind benefits from work.
- Pay bonuses such as a 13^{th} salary or Christmas bonus may effectively decrease the living wage; however, as they are irregular and their amount is uncertain, they are not included in our calculations. Living wage is based on the assumption that monthly expenses should be possible to finance from regular monthly labour income; and irregular income can be used for irregular expenses.
- Overtime pay bonus is not accounted for, because the living wage should be earned during normal hours (ILO Convention 1 (1919) states a maximum number of 48 hours of work per week in all countries).

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Appendix

Table A1 WageIndicator countries

Country name	Participation rate		Unemployment rate		Fertility
	male	female	male	female	rate
Angola	93.5	74.4	7.3	7.9	5.98
Argentina	94.6	65.9	6.4	8.4	2.19
Australia	90.5	75.2	5.2	5.3	1.93
Austria	92.5	82.6	4.3	4.3	1.44
Azerbaijan	91.1	81.8	4.4	6.5	2
Bangladesh	97.1	66.3	4	5.2	2.21
Belarus	81.4	79.8	9.7	9.7	1.62
Belgium	92.2	80.6	7.7	7.4	1.79
Benin	92.8	75.9	1	1.1	4.93
Botswana	94.2	86.9	14.8	21	2.67
Brazil	93.1	71.9	5.2	9.1	1.81
Bulgaria	85.9	79.4	13.5	10.8	1.5
Burundi	96.6	95.9	7.2	8.2	6.12
Cambodia	96.8	87.2	1.5	1.6	2.89
Canada	90.6	82.3	7.6	6.8	1.61
Colombia	96.3	69.6	8	13.5	2.32
Congo, Dem. Rep.	94.4	86.4			6.04
Costa Rica	95.6	58.8	5.9	10.5	1.81
Cyprus	93.5	80.6	12.4	11	1.47
Czech Republic	95.3	80.6	6	8.2	1.45
Denmark	92.2	85.4	7.5	7.5	1.73
Egypt	96.9	29.7	7	27.1	2.81
El Salvador	94.7	61.4	8.9	4.2	2.21
Estonia	91.6	84.9	11	9.2	1.55
Ethiopia	97.9	86.5	2.8	8.4	4.64
Finland	90.7	84.2	8.1	7	1.8
France	94.2	83.7	9.8	10	2.01
Germany	93.0	81.0	5.6	5.2	1.38
Ghana	90.7	84.5	3.5	3.6	3.92
Greece	94.1	72.2	21.4	28.1	1.34
Guatemala	97.5	57.4	3.6	5	3.84
Guinea	94.5	77.3	3.5	2.7	5
Honduras	95.9	52.9	4.1	6.1	3.05
Hungary	86.9	75.0	11.2	10.6	1.34
Chile	92.5	63.3	5.4	7.9	1.83
China	96.8	86.4	5.1	3.7	1.66
India	97.5	36.2	3.1	4	2.51
Indonesia	97.0	59.0	5.6	8.2	2.37
Ireland	89.1	71.0	17.6	11	2.01

Table A1 continuation

Country name	Participation rate		Unemployment rate		Fertility
	male	female	male	female	rate
Italy	88.8	64.2	9.9	11.9	1.4
Kazakhstan	95.5	90.7	4.3	6.4	2.59
Kenya	89.8	79.7	8.1	10.5	4.46
Korea, Rep.	90.0	62.2	3.4	2.9	1.3
Latvia	91.1	85.9	16	13.8	1.44
Lithuania	89.1	87.9	15	11.5	1.6
Luxembourg	94.6	76.3	4.5	5.9	1.57
Madagascar	99.2	93.2	2.7	4.6	4.53
Mexico	94.6	54.3	4.8	4.9	2.22
Mozambique	97.5	96.1	7.3	7.8	5.26
Namibia	90.6	75.6	14.7	18.8	3.11
Netherlands	93.3	82.6	5.3	5.2	1.72
Nicaragua	93.7	59.6	8.1	7.1	2.54
Niger	98.2	44.7	5.6	4	7.57
Pakistan	96.9	25.3	4	8.9	3.26
Paraguay	96.2	66.6	5.2	7.8	2.9
Peru	95.9	78.2	4.1	3.8	2.45
Poland	89.7	79.0	9.4	10.9	1.3
Portugal	92.4	84.7	15.7	15.6	1.28
Romania	87.3	71.2			1.53
Russian Federation	92.3	86.2	5.8	5.1	1.59
Rwanda	95.7	96.7	0.8	0.4	4.62
Senegal	97.3	77.2	7.6	12.7	4.98
Slovakia	92.8	81.5	13.5	14.5	1.34
Slovenia	91.7	88.2	8.3	9.4	1.58
South Africa	82.3	62.0	22.7	27.8	2.41
South Sudan					5.01
Spain	92.2	78.0	24.9	25.6	1.32
Sri Lanka	94.6	44.6	3.5	7.4	2.35
Sweden	93.5	87.4	8.2	7.8	1.91
Tanzania	97.6	95.6	2.5	4.5	5.29
Togo	94.5	92.0	7.3	7.9	4.7
Turkey	88.0	33.2	8.6	10.7	2.06
Uganda	94.2	90.6	3.5	4.9	5.96
Ukraine	86.3	79.0	8.1	7.3	1.53
United Kingdom	91.4	78.5	8.4	7.4	1.9
United States	89.3	75.2	8.3	7.9	1.88
Vietnam	95.2	88.6	1.9	2.2	1.77
Zambia	96.9	80.1	14.7	11.3	5.73
Zimbabwe	97.3	91.0	4.3	3.7	3.56

Source: ILO EAPEP, World Bank databank
Note: Estimates on the economically active population are publicly available in the ILO EAPEP database which includes the participation and unemployment rate of the working age population by gender in 190 countries as of 2010. The latest available fertility rates are available from 2012.

Table A2

	New Zealand Living Wage
Household composition	Family of two adults with two children
Interpretation of living wage	Living wage is the income necessary to provide workers and their families with the basic necessities of life. A living wage will enable workers to live with dignity and to participate as active citizens in society.
Employment status	Two income earners, one working full time and the other half time. (total 60 hours of work per week)
Food expenses	The Food Cost Survey carried out by the University of Otago is used to determine the food expenses of family of two adults and two children. The food basket meets the nutritional needs and includes the most commonly consumed fruits and vegetables.
Accommodation	Average lower quartile national rent is obtained from the Ministry of Business, Innovation and Employment. Two calculations are produced one with average national rent and other with Auckland (the capital) rent.
Transportation	Based on average expenditure determined from the Household Economic Survey.
Other expenses	Statistics from New Zealand's Household Economic Survey are used to estimate average expenditure on other items. The cost of 10 hours childcare per week is estimated at market prices.
Provision for unexpected events	Two percent of gross income is assumed for savings
Income from government transfers	Yes, income support entitlements
Government Deductions and Taxes	Yes, mandatory payroll deductions are assumed.

Notes: The parameters of living wage estimates produced in New Zealand, Vancouver, and rural South Africa. New Zealand: The living wage campaign in New Zealand was launched in 2012 and the calculation of living wage is based on King and Waldegrave (2012).

Table A3

	Rural South Africa Living Wage
Household composition	Two adults with children and the number of children is determined by the current fertility rate in the country.
Interpretation of LW	Fairtrade definition of living wage.
Employment status	The typical number of full-time equivalent workers per couple is calculated when one worker in a family has a full-time employment and the probability of employment of second spouse is estimated using the participation rate adjusted for unemployment rate.
Food expenses	Food basket has 2261 calories, calories from proteins (12.5%), fats (24.5%) and carbohydrates (63.0%). 10 percent is added to the cost of diet to allow for some variety. The cost of the 2 bottles of beer per adult per week is added. Food prices are determined in the local market. Children have the same diet as parents.
Accommodation	The cost of rent for a basic acceptable dwelling and utility costs and other housing costs. At least 2 potential sleeping rooms are required for a family of 4 or 5 persons.
Transportation	Transport costs are calculated to allow workers at least one trip to the nearest town once per week.
Other expenses	Using data on household income and expenditure data the cost of non-food and non-housing expenditures is estimated to equal approximately to the food expenses.
Provision for unexpected events	10% of final living wage
Income from government transfers	Yes
Government Deductions and Taxes	Yes, mandatory payroll deductions are assumed.

Notes: South Africa: The living wage for rural South Africa with focus on wine grape growing in Western Cape province was developed by Anker and Anker (2013) for Fairtrade International.

Table A4

	Vancouver Living Wage
Household composition	Two adults with two children.
Interpretation of LW	The living wage is the hourly rate of pay at which a household can meet its expenses once government transfers have been added and government deductions have been subtracted.
Employment	35 hours of paid work for each parent assuming equal hourly wage (total 70 hours of work per week)
Food expenses	The average cost of food basket for a family is based on the definition of National Nutritious Food Basket and is adjusted with the current prices in the district.
Accommodation	Expenses include rent, utilities, telephone and insurance. Rent equals to the median rent for three-plus bedroom apartments. Utility (water, fuel and electricity) is determined from Census data and telephone expenses equal to present phone rates. The cost of insurance is obtained from an insurance agent.
Transport	Family is assumed to have a car and one bus pass. The expense of vehicle is determined from Canada's Market Basket Measure.
Other expenses	Other expenses include personal care items, household supplies and furniture, school supplies, and modest levels of reading materials, recreation and entertainment. The calculation of other expenses builds upon the Canada's Market Basket Measure and includes: clothing and footwear, the cost of full-time child care, the cost of before and after school care and summer care, the cost of premium health care plan and the cost of parent education.
Provision for unexpected events	Two weeks income from labour on a yearly basis (i.e. approximately 4% of monthly household expenditure).
Income from government transfers	Yes
Government Deductions and Taxes	Yes

Vancouver: The living wage campaign in Vancouver was launched in 2008 and the calculation of living wage is developed by Richards et al. (2008) and is regularly updated since.

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